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July 5, 2006

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: KSYS (TV) Medford, OR—Request for  
waiver of the July 1, 2006  
replication/maximization interference protection  
deadline

Ms. Dortch:

Southern Oregon Public TV, Inc., licensee of public television station KSYS (TV) (Facility ID 61350) Medford, Oregon, hereby requests a waiver of the July 1, 2006 replication/maximization interference protection deadline, due to unique circumstances beyond its control and to severe financial restraints. Because of terrain limitations, KSYS (TV) cannot build a digital TV facility that will provide actual service to 80% of the population of its authorized facilities without using translators.

Public television station KSYS operates in Medford, Oregon, on analog Channel 8 with 13 translators to provide service to southern Oregon communities.<sup>1</sup> Its companion digital channel is 42, and the licensee is currently operating a non-collocated DTV facility on Channel 42 pursuant to Special Temporary Authority and at a reduced power.<sup>2</sup> KSYS has elected to operate its permanent digital facility on analog Channel 8 and has received a channel destination on Channel 8. By July 1, 2006, it must provide a digital signal to 80% of the number of viewers served by the 1997 facility on which the replication coverage was based. As currently operated, the KSYS DTV facility on Channel 42 serves approximately 50% of the viewers.<sup>3</sup>

Medford itself is located high in the Cascade Range in southern Oregon. It is bounded to the east by the Rogue River National Forest, to the north by the Umpqua National Forest, to the south by Klamath National Forest, and to the west by the Siskiyou National Forest. It is a lightly populated area that has severe terrain limitations for digital and analog signals (see Exhibit 3). The KSYS analog Channel 8 needs to use thirteen translators in

<sup>1</sup> These 13 translators are the only way to provide actual service in the valleys where the people live. Translators are needed to provide service to within 5 miles from station's own studio.

<sup>2</sup> See Exhibit 1 for the current facilities of KSYS (TV).

<sup>3</sup> See Exhibit 2, a redacted engineering analysis of the KSYS-DT situation.

order to provide service to its coverage area, because of the terrain limitations, and not a single translator extends the coverage of KSYS beyond its protected contours.<sup>4</sup>

KSYS is so terrain-limited that its 1997 analog facilities (upon which replication is based) provide for operation on VHF Channel 8 with 191 kW of effective radiated power at a height above average terrain of 818 m. In order to replicate that signal, KSYS must operate a digital station using 366 kW of effective radiated power at 802 m above average terrain from a site co-located with the analog station. By contrast, KSYS can serve 50% of its population operating with the Special Temporary Authority digital facilities on Channel 42 with 4 kW of effective radiated power at 412 m. However, it cannot serve the same people, so with replication a large percent of the population now receiving digital service will lose that service.<sup>5</sup> The site of the STA is not the same as the replication site.

In order to cover the remaining 30% (required to reach the 80% benchmark) of the population, a huge expenditure of funds will be required and then, while it will theoretically cover the population on paper, KSYS will only provide limited coverage in the "real world" situation. In other words, this public television station cannot serve the people until the transition, when it can convert its analog translators to digital, or when it can obtain digital companion channels.

Currently, the licensee of KSYS has commissioned engineering studies to see if it can apply for companion digital channels for some of its translators located in certain areas so they will be able to demonstrate to the Commission that using its STA facilities and a series of translators, KSYS is effectively complying with the Commission's requirements by serving 80% of the analog population.<sup>6</sup> In the alternative, KSYS might utilize the Distributed Television techniques set forth in Media Docket 05-312.<sup>7</sup> However, the Commission has taken no action on the Distributed Television system docket, and KSYS would be forced to guess what the final requirements would be.

KSYS finds itself in a situation of having to spend thousands of dollars of public funds in order to provide an "on paper" signal to 80% of the population served by the analog station. KSYS cannot hope to duplicate the actual analog coverage, because it cannot obtain enough digital companion stations to provide that duplicated coverage. It makes far more sense for the Commission to waive the requirements of the replication/

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<sup>4</sup> See Exhibit 3. The area marked in yellow is the area that would lose coverage. The map itself is the Longley-Rice actual coverage map demonstrating the severe terrain problem.

<sup>5</sup> See Exhibit 4 for the location and coverage of these critical translators. With the STA facilities and translators, the 80% benchmark can be obtained.

<sup>6</sup> By using three digital translators, KSYS can provide a solid digital service to 80% plus of its population.

<sup>7</sup> Pursuant to paragraph 6 of the Report and Order in MB Docket 05-312, KSYS is not requesting a waiver of the buildout date because it is exploring distributed television. Rather, it is requesting the waiver because it cannot build a facility that provides actual service to 80% of the population.

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maximization deadline until such time as KSYS obtains and can construct digital companion translator channels in Grants Pass and Roseburg. As the attached map (Exhibit 4) illustrates, the STA DTV facilities, along with companion digital translators in Grants Pass, Cave Junction, and Roseburg, will provide KSYS with the 80% compliance, provided that the Commission accepts service provided by the translators as digital service to meet the Paragraph 78 requirements.

There is an additional factor, and that is loss of existing digital service. The KSYS-DT Special Temporary Authority facility is located approximately 30 miles southeast of the KSYS main transmitter site. As the attached Exhibit 3 demonstrates, by moving the DTV transmitter to the authorized site, and even with the full authorized power, large populations that now receive DTV service would lose coverage.

Due to circumstances beyond KSYS's control, and despite many years of planning, KSYS does not have sufficient funds to build out the full 366 kW digital station. KSYS is a viewer-supported station that depends on donations from those viewers for its operating and capital funds, along with various federal and state grants. Most of the funds available to KSYS for digital operations have come from those grants, and, as the Commission is well aware, obtaining federal and/or state grants could be a multi-year process. It is almost never accomplished in a short time frame. KSYS began planning years ago for digital facilities, and it applied for and obtained the grants necessary to construct digital facilities to meet the requirements.

However, in a completely unexpected situation, KSYS was notified by its landlord that the building housing the main studio was for sale and would likely have to vacate its leased premises within a year. In assembling the funds necessary to meet the DTV obligations, KSYS was completely unaware that it would have to vacate its existing studios. Faced with a very substantial increase in cost, occasioned by the need to reconstruct its studios in a new location, KSYS does not have sufficient funds to both build a DTV facility and to move its studios. By being forced now to construct its full DTV facilities, the station will not have sufficient funds to remain on the air, and a very valuable public resource will be lost.

KSYS has taken significant steps to try to meet the deadlines, in addition to its planning and its grant applications. Southern Oregon Public Television is also the licensee of public television station KFTS in Klamath Falls, Oregon. Its assigned DTV channel is 33, and the station has been fully built out. The license to cover its DT construction permit was granted on March 23, 2006 (BLEDT-20060202AHF).

Southern Oregon has received 1 million dollars from the State of Oregon to build DTV facilities and the digital infrastructure for station KSYS. NTIA has given the station a 2/3 grant for a \$957,075 project to build DTV for both KSYS and KFTS, so part of the

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State's 1 million dollars has been used to match the federal grant and part to build KFTS-DT. KSYS has also obtained a RUS grant to build two companion translators; that grant is pending FCC licensing and will not be available unless Southern Oregon obtains two companion digital translators. After constructing KFTS, and the STA facilities for KSYS, as well as digitizing large parts of its technical infrastructure, Southern Oregon has about \$417,000. Of that \$417,000, \$100,000 will be needed to convert the existing analog Channel 8 facility to digital in 2009, and the studies have shown that the licensee will need to build some DTV relay microwave facilities at a cost of \$50,000. It will cost Southern Oregon about \$500,000 to complete the remaining infrastructure and to build out the digital studio equipment. On top of that, Southern Oregon estimates that the actual studio move costs, without any changes or upgrades, will be \$150,000. The cost of construction of the CP DTV facility, including the transmitter and antenna, is estimated at about \$250,000. Without further grants, which will be applied for, Southern Oregon cannot build out its full DTV facilities, move its studios, complete the acquisition and installation of digital studio equipment, build the companion digital translators necessary to provide actual service, and convert Channel 8 and its translators to digital in 2009 (see Exhibit 5).

For the reasons set forth above, Southern Oregon Public Television hereby requests a waiver of the buildout date.

Respectfully submitted,

SOUTHERN OREGON PUBLIC TV, INC.

By: \_\_\_\_\_  
George R. Borsari, Jr.  
Its Attorney

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**Callsign:** KSYS                      **Service:** TV                      **Community:** MEDFORD, OR, US

**Licensee:** SOUTHERN OREGON PUBLIC TV, INC.

**Channel:** 8

**Offset:** Plus

**Specified Channel:** 8

**Max HAAT:** 1024 m

**File No.:** BLET-19940912L

**Cutoff Date:**

**Dom. Status:** LIC

**Facility ID:** 61350

**Application ID:** 202404 ASRN

**Latitude:**                      N     42°     41 '     32 "

**Longitude:**                      W     123°     13 '     45 "

**ERP:**                      191 kw

**HAAT:**                      818 m

**RCAMSL:**                      1643 m

**RCAGL:**                      39 m

**Zone:** Not in a Border Zone

**Antenna:**

Non-DA

**Beam Tilt:** Yes

**Electrical Deg:** 1

**Mechanical Deg:**

**Polarization:**

Horizontal

**Rotation:**

**Antenna ID:**

**Make:**

**Model:**

**Callsign:** KSYS

**Service:** DT

**Community:** MEDFORD, OR, US

**Licensee:** SOUTHERN OREGON PUBLIC TV, INC.

**Channel:** 8

**Offset:**

**Specified Channel:** 42

**Max HAAT:** 1009 m

**File No.:** BPEDT-20000421ABU

**Cutoff Date:**

**Dom. Status:** CP

**Facility ID:** 61350

**Application ID:** 500641 ASRN:



**Latitude:** N 42° 41' 32"  
**Longitude:** W 123° 13' 45"

**ERP:** 366 kw  
**HAAT:** 802 m  
**RCAMSL:** 1627 m  
**RCAGL:** 23 m  
**Zone:** Not in a Border Zone

**Antenna:**

Non-DA

**Beam Tilt:** Yes**Electrical Deg:****Mechanical Deg:****Polarization:**

Horizontal

**Rotation:****Antenna ID:** 33352**Make:** KAT**Model:** K723144**Callsign:** KSYS**Service:** DS**Community:** MEDFORD, OR, US**Licensee:** SOUTHERN OREGON PUBLIC TV, INC.**Channel:** 8**Offset:****Specified Channel:** 42**Max HAAT:** m**File No.:** BDSTA-20020808ACD**Cutoff Date:****Dom. Status:** STA**Facility ID:** 61350**Application ID:** 609070**ASRN:**

**Latitude:** N 42° 17' 54"  
**Longitude:** W 122° 44' 59"

**ERP:** 4 kw  
**HAAT:** 412 m  
**RCAMSL:** 1172 m  
**RCAGL:** m  
**Zone:** Not in a Border Zone

**Antenna:**

Directional

**Beam Tilt:** No**Polarization:****Rotation:** 110**Antenna ID:** 44143**Make:** KTS**Model:** K 723147

**Antenna Pattern for the Directional Antenna:**

Directional antenna relative field values do not include clockwise rotation, if shown above.

<b>0°</b>	<b>0.</b>	<b>10°</b>	<b>0.02</b>	<b>20°</b>	<b>0.05</b>	<b>30°</b>	<b>0.02</b>	<b>40°</b>	<b>0.18</b>	<b>50°</b>	<b>0.31</b>
<b>60°</b>	<b>0.41</b>	<b>70°</b>	<b>0.53</b>	<b>80°</b>	<b>0.68</b>	<b>90°</b>	<b>0.84</b>	<b>100°</b>	<b>0.96</b>	<b>110°</b>	
<b>120°</b>	<b>0.98</b>	<b>130°</b>	<b>0.93</b>	<b>140°</b>	<b>0.81</b>	<b>150°</b>	<b>0.6</b>	<b>160°</b>	<b>0.46</b>	<b>170°</b>	<b>0.54</b>
<b>180°</b>	<b>0.34</b>	<b>190°</b>	<b>0.46</b>	<b>200°</b>	<b>0.6</b>	<b>210°</b>	<b>0.81</b>	<b>220°</b>	<b>0.93</b>	<b>230°</b>	<b>0.98</b>
<b>240°</b>		<b>250°</b>	<b>0.97</b>	<b>260°</b>	<b>0.84</b>	<b>270°</b>	<b>0.68</b>	<b>280°</b>	<b>0.53</b>	<b>290°</b>	<b>0.41</b>
<b>300°</b>	<b>0.3</b>	<b>310°</b>	<b>0.18</b>	<b>320°</b>	<b>0.02</b>	<b>330°</b>	<b>0.05</b>	<b>340°</b>	<b>0.09</b>	<b>350°</b>	<b>0.11</b>

Additional Azimuths:



Wednesday, November 03, 2004 2:49:09 PM

Message

EXHIBIT 2

From:           i Stan Salek <ssalek@h-e.com>  
Subject:        KSYS-DT Transition - Preliminary Study Results  
To:             i Tom Werner  
                i grb@baplaw.com

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Tom,

As you requested of Dane Ericksen, we have completed preliminary studies regarding FCC MB Docket 03-15 transition issues related to Station KSYS-DT, Medford, Oregon. Specifically, you requested guidance in preparing the FCC Pre-Election Form 381, as well as advice on selecting licensed NTSC Channel 8 as the KSYS final DTV channel. In the case of the potential Channel 8 selection, an analysis of the FCC's 80% coverage criteria associated with the July 1, 2006, build-out deadline is also needed.

As mentioned above, in order to propose full Channel 8 facilities for post-transition DTV operation, the transitional DTV facility on Channel D42 would need to cover at least 80% of the population served by the original 1997 DTV allotment, as based on 2000 U.S. Census population, using appropriately adjusted OET-69 interference and coverage projection techniques. The allotment area generally encompasses the NTSC Grade B contour of the NTSC facility. Our calculations for the presently operating KSYS-DT STA facility yield a coverage of just over 50% of the allotment population, so the 80% criteria could not be met by that facility as-is. Upon further examination, we found that even if the STA facility power was increased 100-fold, to 400 kW ERP, while at the same time orienting the authorized transmitting antenna pattern to best fill the allotment area, coverage would increase to just over 60% of the allotment population, still below the required 80%. Communities that cannot be practically served from the STA site, but that are served by the original allotment, include Roseburg, Cottage Grove, Elkton, Coquille, and the coastal communities extending from Brookings northward beyond Coos Bay.

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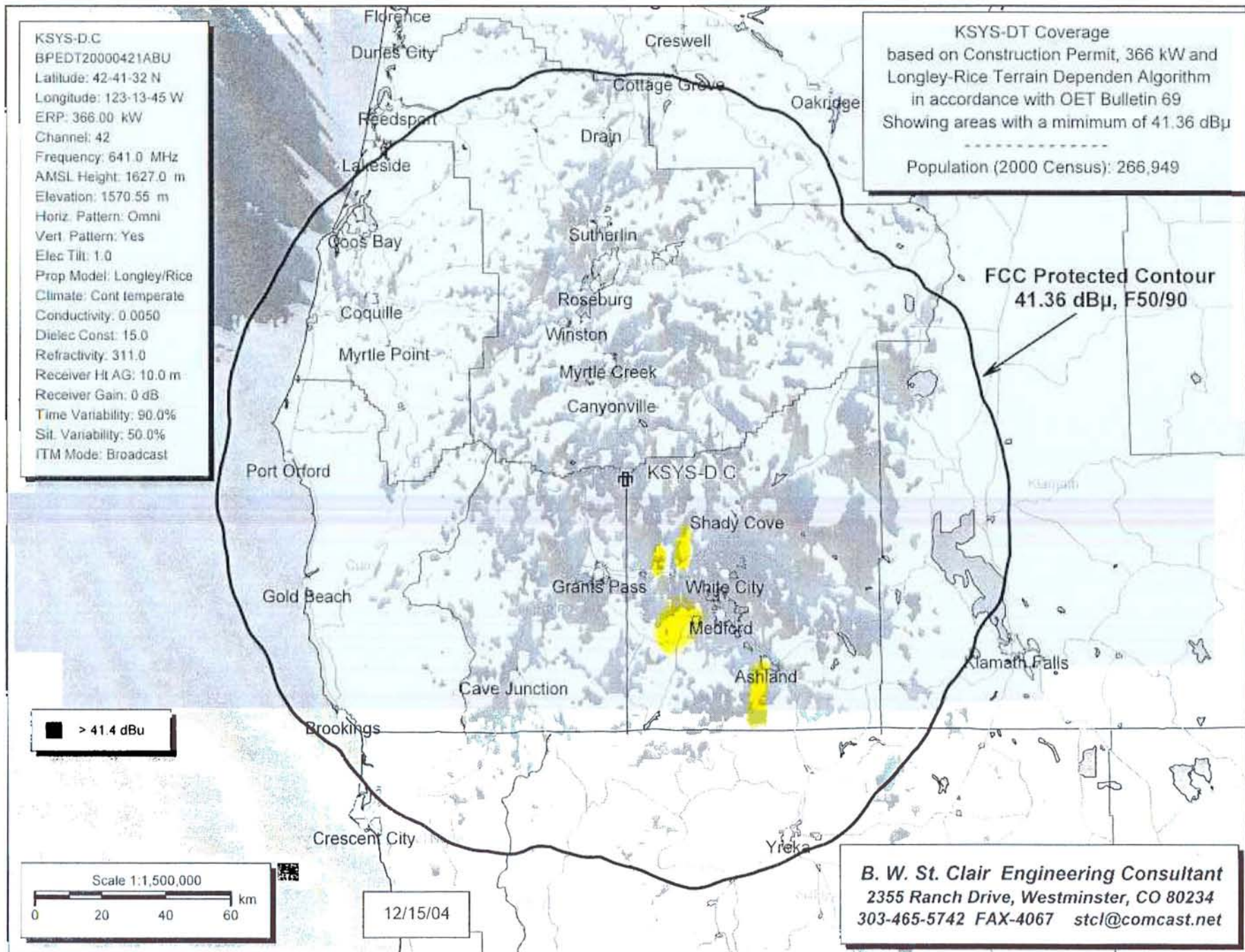


EXHIBIT 4

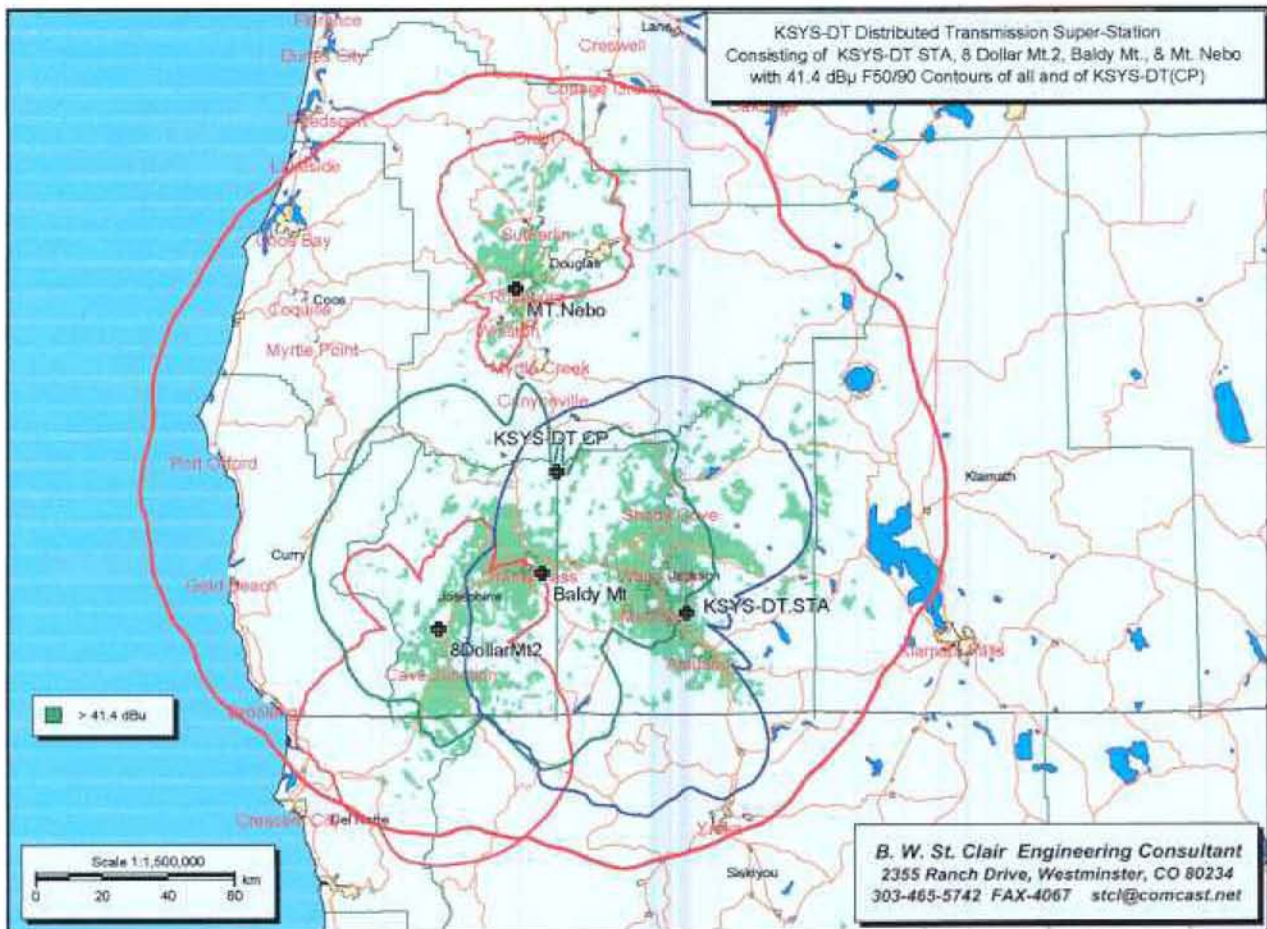


Exhibit 5

Southern Oregon Public Television  
Digital Television  
Source of Funds and Estimated Expenses  
June, 2006

Source of Funds

State of Oregon

1,000,000

NTIA

957,000

1,957,000

Estimated Expense

KSYS STA, KFTS DT construction and  
digitizing technical infrastructure (Spent)

1,540,075

Conversion of Channel 8 to digital

100,000

Digital Microwave

50,000

Studio Move

150,000

Construction of Channel 42 DTV

250,000

Digital Studio, Infrastructure

500,000

2,590,075

Shortfall

-633,000